

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Donald B. Gage, Manuel Rivera Jr.
Assignee: Dell Products L.P.
Title: Method and System for Optical Medium Power Calibration
Serial No.: 10/637,144 Filed: August 8, 2003
Examiner: Adam Giesy Group Art Unit: 2627
Docket No.: DC-05201 Customer No.: 33438

Austin, Texas
October 10, 2007

Mail Stop Appeal Brief - Patents
Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 CFR § 41.37

Dear Sir:

Applicant submits this Appeal Brief pursuant to the Notice of Appeal filed in this case on August 22, 2007. The \$510.00 fee for this Appeal Brief is being paid electronically via the USPTO EFS. The Board is authorized to deduct any other amounts required for this appeal brief and to credit any amounts overpaid to Deposit Account No. 502264.

I. REAL PARTY IN INTEREST - 37 CFR § 41.37(c)(1)(i)

The real party in interest is the assignee, Dell Products L.P. as named in the caption above and as evidenced by the assignment set forth at Reel 014386, Frame 0244.

II. RELATED APPEALS AND INTERFERENCES - 37 CFR § 41.37(c)(1)(ii)

Based on information and belief, there are no appeals or interferences that could directly affect or be directly affected by or have a bearing on the decision by the Board of Patent Appeals and Interferences in the pending appeal.

III. STATUS OF CLAIMS - 37 CFR § 41.37(c)(1)(iii)

Claims 1-7 and 10-21 are pending in the application. Claims 8 and 9 have been cancelled. Claims 1-3, 6-10 and 13-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Publication No. 2006/0067190 A1 issued to Kurobe et al. in view of U.S. Patent No. 6,526,014 B2 issued to Masaki et al. Claims 4, 5, 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kurobe in view of Masaki and further in view of U.S. Publication No. 2004/0130993 A1 issued to Nadershahi. Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kurobe et al in view of Kubota et al and further in view of WO 2003/091935 A3 issued to Stan. The rejection of Claims 1-7 and 10-21 is appealed. Appendix "A" contains the full set of pending claims.

IV. STATUS OF AMENDMENTS - 37 CFR § 41.37(c)(1)(iv)

No amendments after final have been requested or entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER - 37 CFR § 41.37(c)(1)(v)

Optical Power Calibration (OPC) adjusts a write strategy with a test write at an inner diameter of an optical medium (pg.2, line 24-pg.3, line 5). To provide an improved OPC adjustment, an OPC engine (Figure 1, element 18) interfaces with a write strategy table (Figure 1, element 20) and performs test writes at plural distributed locations of an optical medium (Figure 1, element 14) to adjust a write strategy of the optical medium and stores the adjusted write strategy to a hard disk drive (Figure 1, element 32; Claim 1, page 5, line 15 – page 6, line 20). An optical medium write power calibration performs test writes at distributed locations of an optical medium (Figure 2, elements 46, 50 and 54), analyzes the test writes to determine power setting variation at each location (Figure 2, elements 48, 52, and 56) and averages the determined power setting variations to determine an adjusted write strategy (Figure 2, element 58; Claim 10; page 6, line 21 – page 7, line 30). An OPC engine (Figure 1, element 18) interfaced with a write strategy table (Figure 1, element 20) adjusts a write strategy for an optical medium (Figure 1, element 14) by performing test writes at plural distributed locations and averaging power settings determined for the distributed (Claim 18; page 5, line 15 – page 6, line 20).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL - 37 CFR § 41.37(c)(1)(vi)

The rejection of Claims 1, 10 and 18 under Section 103 as obvious over Kurobe in view of Masaki is appealed.

VII. ARGUMENT - 37 CFR § 41.37(c)(1)(vii)

A. Claim 1

Claim 1 recites, in part, “the OPC engine further operable to store the adjusted write strategy to a hard disk drive for use in subsequent writes.”

The Examiner admits that neither Kurobe nor Masaki disclose a hard drive to store write strategies but maintains the rejection of Claim 1 by equating ROM to a hard drive and stating that use of a hard drive fails to solve any problems or has a particular purpose. In order to reject Claim 1 as obvious, the Examiner must present a reference for each and every element recited by Claim 1. This the Examiner has failed to do. Further, a hard drive stores a write strategy outside of the optical drive, allowing access of a write strategy for other optical drives interfaced with the hard drive and therefore solves this and other problems. Thus, Applicants respectfully request that the Board reverse the rejection of Claim 1 as well as Claims 2-7 which depend from Claim 1.

B. Claim 10

Claim 10 recites, in part, “performing test writes and reads at plural locations distributed across the optical medium,” “analyzing the modulated signal read from each test read to determine the power setting variation at each location,” and “averaging the determined power setting variations for the locations to determine an adjusted write strategy.”

Kurobe and Masaki cannot make obvious Claim 10 because Kurobe and Masaki fail to teach, disclose or suggest all elements recited by Claim 10. For example, Claim 10 recites averaging power settings found at plural distributed areas. The Examiner bases the rejections of Claim 10 on Figure 18B of Masaki, however, Figure 18B discloses averages used for a single location, not different distributed locations. In particular, the examiner points to Figure 17 at

step S3. However, Masaki performs averaging only within a specific zone, not across an optical medium. Masaki specifically states that its division test writing processing unit is “independently executed” in each of the inner, intermediate and outer rims (4:64). Therefore, Masaki fails to disclose the “plural locations distributed across the optical medium” as recited by Claim 10. Masaki explicitly teaches away from averaging inner, intermediate and outer diameter tracks as recited by Claims 3 and 17. Accordingly, Applicants respectfully request that the Board reverse the rejection of Claim 10 and submit that Claims 10-17 are fully allowable over Kurobe and Masaki.

C. Claim 18

Claim 18 recites, in part, “an Optical Power Calibration (OPC) engine … operable to … adjust the determined write strategy’s write power setting by performing test writes and reads at plural distributed locations of the optical medium, determining the power setting at each location that had the lowest read amplitude and jitter variations, and averaging the determined power settings to determine the adjusted write power setting.”

Applicants respectfully submit that neither Kurobe nor Masaki teach, disclose or suggest “by performing test writes and reads at plural distributed locations” and “averaging the determined power settings to determine the adjusted write power setting” as recited by Claim 18 and discussed above with respect to Claim 10. Accordingly, Applicants respectfully request that the Board reverse the rejections of the Examiner for Claims 18-21.

VIII. CLAIMS APPENDIX - 37 CFR § 41.37(c)(1)(viii)

A copy of the pending claims involved in the appeal is attached as Appendix A.

IX. EVIDENCE APPENDIX - 37 CFR § 41.37(c)(1)(ix)

None

X. RELATED PROCEEDINGS APPENDIX - 37 CFR § 41.37(c)(1)(x)

There are no related proceedings.

XI. CONCLUSION

For the reasons set forth above, Applicant respectfully submits that the rejection of pending Claims 1-7 and 10-21 is unfounded, and requests that the rejection of claims 1-7 and 10-21 be reversed.

I hereby certify that this correspondence is being electronically submitted to the COMMISSIONER FOR PATENTS via EFS on October 10, 2007.

/Robert W. Holland/

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Respectfully submitted,

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CLAIMS APPENDIX A - 37 CFR § 41.37(c)(1)(viii)

1. An information handling system comprising:
processing components operable to generate information for storage on an optical medium;
an optical disk drive interfaced with the processing components and operable to process the information for writing to the optical medium;
a write strategy table having plural write strategies, each write strategy associated with one or more optical medium types;
a laser associated with the optical disk drive and operable to illuminate the optical medium to burn information onto the optical medium with a write strategy associated with the optical medium or to read information from the optical medium; and
an Optical Power Calibration (OPC) engine interfaced with the write strategy table and the laser, the OPC engine operable to perform test writes and reads at plural distributed locations of the optical medium, the test writes having predetermined variations of the write strategy associated with the optical medium, the OPC engine adjusting the write strategy to write the generated information to the optical medium based on the quality of modulated signals read from the test writes at the distributed locations, the OPC engine further operable to store the adjusted write strategy to a hard disk drive for use in subsequent writes.
2. The information handling system of Claim 1 wherein the OPC engine test writes are to an inner diameter track, middle diameter track and outer diameter track of the optical medium.
3. The information handling system of Claim 2 wherein variations of the write strategy comprise write power variations and wherein the OPC adjusts the write strategy to write the generated information to an average of the write power at each of the inner, middle and outer diameter tracks that provided a modulated signal having the least amplitude and jitter variations.

4. The information handling system of Claim 2 wherein the optical medium comprises a DVD-RW disc.

5. The information handling system of Claim 2 wherein the optical medium comprises a DVD+RW disc.

6. The information handling system of Claim 2 wherein the optical medium comprises a CD-RW disc.

7. The information handling system of Claim 1 further comprising volatile memory interfaced with the optical disc drive and operable to store the adjusted write strategy for use on a subsequent write to an optical medium of the same type.

10. A method for re-writable optical medium write power calibration, the method comprising:

determining a write strategy from an identification code of an optical medium;
performing test writes and reads at plural locations distributed across the optical medium,
the test writes having predetermined variations from the power setting of the write strategy;
analyzing the modulated signal read from each test read to determine the power setting variation at each location having the least amplitude and jitter variations;
averaging the determined power setting variations for the locations to determine an adjusted write strategy; and
writing information to the re-writable optical medium with the adjusted write strategy.

11. The method of Claim 10 wherein the re-writable optical medium comprises a DVD-RW disc.

12. The method of Claim 10 wherein the re-writable optical medium comprises a DVD+RW disc.

13. The method of Claim 10 wherein the re-writable optical medium comprises a CD-RW disc.

14. The method of Claim 10 wherein the re-writeable optical medium comprises an medium having an unknown identification code and the write strategy comprises a generic write strategy for use with optical media having unknown identification codes.

15. The method of Claim 10 wherein the re-writable optical medium comprises a new medium and the write strategy comprises a generic write strategy associated with a type of re-writable optical medium having an unknown identification code.

16. The method of Claim 10 further comprising:
storing the adjusted write strategy in volatile memory; and
writing information to another re-writable optical medium having the identification code
by using the adjusted write strategy.

17. The method of Claim 10 wherein performing test writes further comprises performing test writes at an inner diameter, middle diameter and outer diameter location of the optical medium.

18. A system for re-writable optical medium write power calibration, the system comprising:

a write strategy table associating re-writable optical medium identification codes and write strategies, each write strategy having a write power setting; and
an Optical Power Calibration (OPC) engine interfaced with the write strategy table, the OPC engine operable to determine a write strategy for an optical medium from the write strategy table and to adjust the determined write strategy's write power setting by performing test writes and reads at plural distributed locations of the optical medium, determining the power setting at each location that had the lowest read amplitude and jitter variations, and averaging the determined power settings to determine the adjusted write power setting.

19. The system of Claim 18 wherein the determined write strategy for the optical medium comprises a generic write strategy associated with unrecognized identification codes.

20. The system of Claim 19 further comprising memory interfaced with the OPC engine and operable to store the adjusted write power setting for use with a write to a subsequent optical medium having the same identification code.

21. The system of Claim 18 wherein the optical medium comprises a blue laser rewritable disc.

EVIDENCE APPENDIX - 37 CFR § 41.37(c)(1)(ix)

None

RELATED PROCEEDINGS APPENDIX - 37 CFR § 41.37(c)(1)(x)

There are no related proceedings.